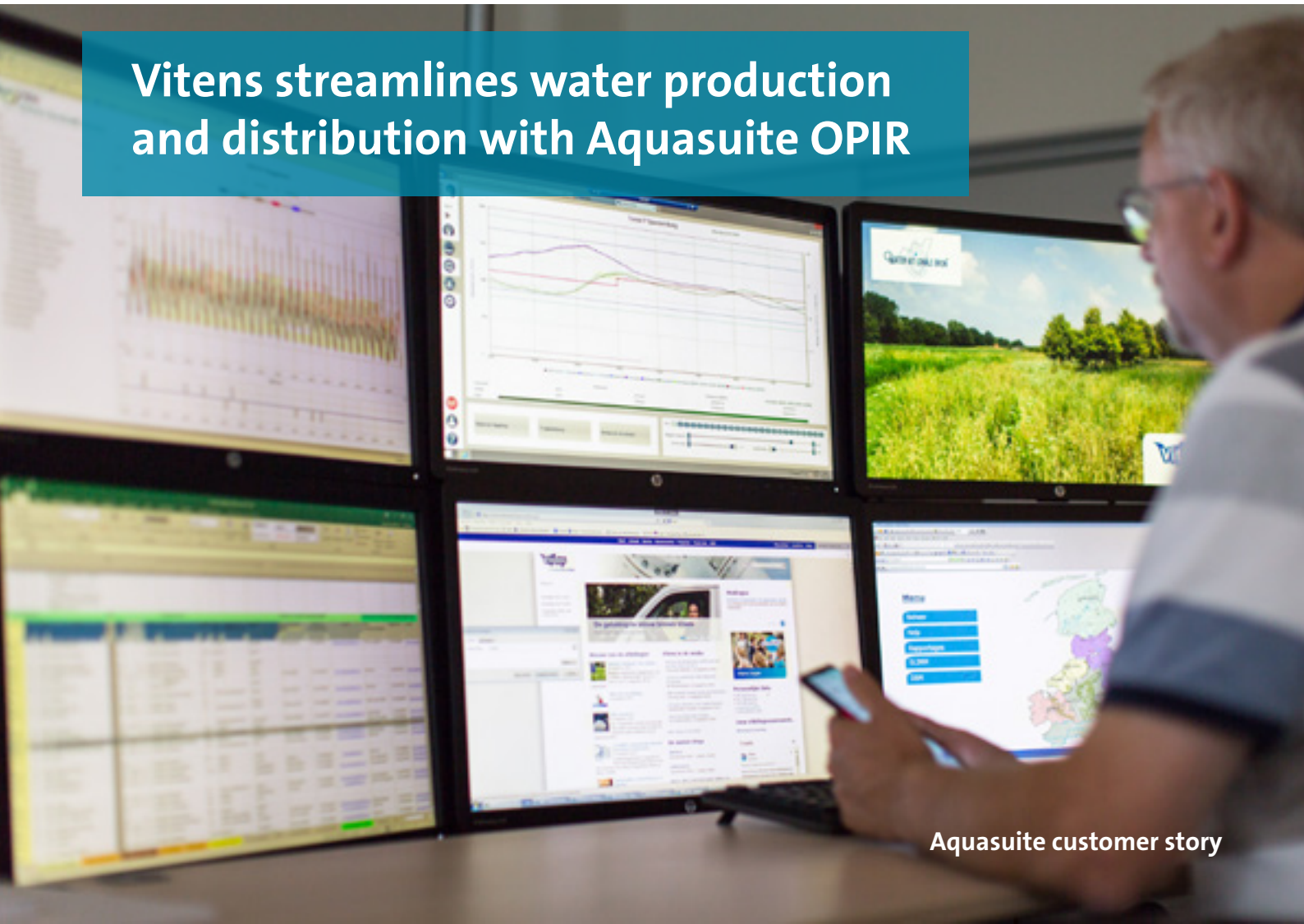


Vitens streamlines water production and distribution with Aquasuite OPIR



Water use varies greatly depending on the time of day, location, weather and many other factors. Each morning millions of us take a shower; on hot days we use hosepipes to water our gardens. The challenge to our water companies is how to predict and meet the demand? Aquasuite OPIR from Royal HaskoningDHV is a tool that predicts water needs, driving accurate production and distribution. The result? Lower energy consumption and better water quality.



Client

Vitens

Question

How can we centralise, automate and optimise our drinking water production?

Solution

The Aquasuite OPIR control application, specifically developed for water companies, predicts the water requirement and adjusts production and distribution accordingly.

Results

- 5-10% more energy-efficient production
- Reduced wear, malfunctions and water wastage
- 12-20% better water quality
- More efficient deployment of staff
- Knowledge guaranteed in the system
- ROI within 3 years
- Constant optimisation through a self-learning, data-driven system

About Vitens

Vitens is the Netherlands' largest drinking water provider, supplying more than 5.6 million households in Friesland, Overijssel, Gelderland, Flevoland and Utrecht with clean drinking water. Created in 2006 from a merger of five provincial water companies, Vitens supplies around 360 billion litres of water per year. The company takes pride in its continuous innovation to deliver excellent service; efficiently and sustainably.

“Our operators have a great deal of insight and expertise, so how do we retain this valuable information should they leave Vitens?”

- Doeke Schippers, Production Manager at Vitens

From local to central

Vitens was seeking to optimise drinking water production and distribution in its 96 production facilities across five provinces. Streamlining this complex process requires centralised management and automation, with an operating system that pulls information from all locations. Vitens was also keen to harness the knowledge of its employees. Doeke Schippers, Production Manager at Vitens, said “Our operators have a great deal of insight and expertise, so how do we retain this valuable information should they leave Vitens? It’s important to take this into account, especially as the labour market matures. It’s much less common today for people to stay with the same employer throughout their career.”

Aquasuite OPIR predicts water demand

Royal HaskoningDHV worked with Vitens to implement Aquasuite OPIR, an application that accurately predicts water consumption and drinking water production over the next 72 hours. Based on local system information and big data, the control software calculates the optimal settings for purifiers, pumps and control valves and controls them centrally. Vitens chose Aquasuite OPIR for two reasons. First, because the software was specially developed for Dutch drinking water companies, Aquasuite OPIR perfectly fits Vitens’ infrastructure: it is designed for flat terrain, adjustable pumps and large supply areas. Secondly, the application was able to identify significant energy savings through the creation of a more uniform, more efficient water production process.



Stable, efficient water production

With Aquasuite OPIR, Vitens can fine-tune its complete water production process to match demand. On the basis of all available information, the application automatically sets optimum values for pressures and flows at purification and pumping stations, as well as the levels in reservoirs and clean water cellars. As a result, the entire system performs with greater stability and efficiency.

In addition, Aquasuite OPIR retains insight into system control and optimisation, relieving the pressure on operators. For example, the application advises on the most appropriate settings to meet higher and lower consumption. In an unexpected situation such as a pipe rupture, the application identifies and reports the issue so that Vitens can address the problem immediately.

This centralised, more stable water production is predicted to reduce Vitens' energy consumption by 5 to 10 percent. Schippers said: "It's a bit like driving a car: if you drive steadily at 100km per hour over a certain distance, you use less fuel than when switching between faster and slower speeds."

Furthermore, Aquasuite OPIR enables Vitens to use lower, night-time energy tariffs. Processing reduces by 80 per cent at night and the water pressure in the pipeline network is more stable. This results in less wear and tear, fewer faults and less wastage of non-returnable water. Stable production also ensures that water is not held for a long time in buffers, which improves its quality: drinking water is generally 12 to 20 percent less turbid as a result.

Aquasuite OPIR delivers further benefits in people management, driving standardisation, efficiency and flexibility and better predicting the need for technicians in certain locations.

More data, the more optimisation

The savings achieved through Aquasuite OPIR mean that the application will pay for itself within three years. Aquasuite OPIR enables Vitens to ride the big data wave – both now and in the future: as more data from sensors, systems and the internet becomes available, the better the system will function.

Schippers continued: "With OPIR we can convert all our local information into data and collect it centrally." And, thanks to the system's intelligent self-learning abilities, water quality and energy savings are likely to continue to improve in the future.

**5-10% more energy-efficient
production**

“With OPIR we can convert all our local data into information and collect it centrally.”





About Aquasuite

Aquasuite is a proven technology that monitors, analyses, visualises and controls the performance of water and wastewater infrastructure through predictive analytics and machine learning. While you gain full real-time visibility across your complete water and wastewater network and treatment, Aquasuite controls your day-to-day operations. It has helped already thousands of industrial, municipal and commercial assets to:

- maintain a calm network
- avoid water losses and improve customer service
- meet environmental compliance
- meet effluent quality regulations
- reduce opex costs
- turn waste into renewable energy source

www.aquasuite.ai | aquasuite@rhdhv.com

Get in touch and meet us

Neil Woodlands

Senior UK Business Development Manager
+44 (0) 7721 848433
neil.woodlands@rhdhv.com

Niels Tiemessen

UK Sales Manager
+31 (0) 682 627 163
niels.tiemessen@rhdhv.com

